Abstract 1 2 A piezoelectric actuator, e.g., for actuating a mechanical component, is 3 proposed, in which a piezoelectric element (2) for acting on an actuating element 4 (9) with a pulling or pushing force, and a compensating element (3; 20) are 5 provided, wherein the piezoelectric element (2) and the compensating element 6 (3; 20) basically have the same temperature expansion coefficients. The 7 compensating element (3; 20) is mechanically coupled to the piezoelectric 8 element (2) in such a fashion that the temperature-induced expansions of the 9 piezoelectric element (2) and the compensating element (3; 20) cancel each 10 other out in the effective direction in such a fashion that the actuating element (9) 11 remains in its position. A heat transfer compound (12) is located between the 12 piezoelectric element (2; 21) and the compensating element (3; 22). 13 14 15 (Figure 1)